

CLAIMS:

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1. ~~A method comprising:~~

displaying a sequence of dark elements against a black background, wherein each of the dark elements has a different gray value and a non-rectangular shape; estimating a blackpoint for a display device based on one of the dark elements selected by the user that is visible and appears to most closely match the background.

2. The method of claim 1, further comprising:

10 modifying a color image for the display device based on the estimated blackpoint.

15 3. The method of claim 2, further comprising delivering the modified color image via a computer network for display on the display device.

4. The method of claim 2, wherein the display device is associated with a client on the computer network, the method further comprising:

transmitting information representative of the estimated blackpoint from the client to a server on the computer network;

20 modifying the color image via the server based on the information; and

delivering the modified color image from the server to the client for display on the display device.

25 5. The method of claim 4, further comprising:

storing the information in a web cookie;

transmitting the web cookie from the client to the server; and

modifying the color image via the server based on the contents of the web cookie.

30 6. ~~The method of claim 2, further comprising:~~

generating a color profile based on the estimated blackpoint; and

~~modifying the color image based on the color profile.~~

7. The method of claim 6, wherein the display device is associated with a client on the computer network, the method further comprising:

5 transmitting the color profile from the client to a server on the computer network;

modifying the color image via the server based on the color profile; and

delivering the modified color image from the server to the client for display on 10 the display device.

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8. The method of claim 7, further comprising:

storing the color profile in a web cookie;

transmitting the web cookie from the client to the server; and

modifying the color image via the server based on the contents of the web 15 cookie.

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9. The method of claim 1, further comprising:

displaying dark elements against the black background for each of the color channels of the display device;

selecting one of the dark elements for each of the color channels that is visible 20 and appears to most closely match the black background; and

estimating channel-specific blackpoints for the color channels of the display device based on the selected dark elements.

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25 10. The method of claim 9, wherein the color channels are red, green, and blue color channels.

11. The method of claim 1, wherein the display device is a cathode ray tube
~~monitor or a flat panel display.~~

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12. The method of claim 1, wherein the non-rectangular shapes include a numeral or a letter.

13. The method of claim 1, further comprising:

5 estimating a gamma and gray balance for the display device;
generating a color profile for the display device based on the estimated blackpoints, the gamma, and the gray balance; and
modifying the color image for the display device using the color profile.

10 14. The method of claim 1, further comprising guiding the client through the process of obtaining the estimated blackpoints, gamma, and gray balance by delivering a series of instructional web pages to the client.

15 15. A system comprising:

a web server residing on a computer network, the web server transmitting web pages to remote clients residing on the computer network;
a color image server residing on the computer network, the color image server transmitting color images referenced by the web pages to the clients for display on display devices associated with the clients;

20 a color profile server residing on the computer network, the color profile server guiding the clients through a color profiling process to obtain information characterizing the color responses of the display devices associated with the clients, wherein the information includes a blackpoint estimate for the color channels of the display devices, and the color profiling process includes:

25 displaying dark elements against a black background, wherein each of the dark elements has a different gray value and a non-rectangular shape,

selecting one of the dark elements that is visible and appears to most closely match the black background, and

30 estimating the blackpoint for a display device based on the selected dark element; and

one or more color correction modules that modify the color images transmitted by the color image server based on the information to improve the accuracy of the color images when displayed on the respective display device.

5 16. The system of claim 15, wherein the color image server stores the information to the client in a web cookie, the client transmits the web cookie from the client to the server, and the color image server modifies the color image via the server based on the contents of the web cookie.

10 17. The system of claim 15, wherein the color profiling process includes: displaying dark elements against the black background for each of the color channels of the display device; selecting one of the dark elements for each of the color channels that is visible and appears to most closely match the black background; and estimating channel-specific blackpoints for the color channels of the display device based on the selected dark elements.

15 18. The system of claim 17, wherein the color channels are red, green, and blue color channels.

20 19. The system of claim 15, wherein the display device is a cathode ray tube monitor or a flat panel display.

25 20. The system of claim 15, wherein the non-rectangular shapes include a numeral or a letter.

30 21. The system of claim 15, wherein the color profiling process includes estimating a gamma and gray balance for the display device, and adding the gamma and gray balance to the information.

22. The system of claim 21, wherein the color profiling process includes guiding the client through the process of obtaining the estimated blackpoint, gamma, and gray balance by delivering a series of instructional web pages to the client.

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23. 24. A computer readable medium containing program code that upon execution by a processor:

displays dark elements against a background, wherein each of the dark elements has a different gray value and a non-rectangular shape;

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estimates a blackpoint for a display device based on one of the dark elements selected by the user that is visible and appears to most closely match the background.

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24. 25. The computer readable medium of claim 24, wherein the code is configured to modify a color image for the display device based on the estimated blackpoint.

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25. 26. The computer readable medium of claim 25, wherein the code is configured to deliver the modified color image via a computer network for display on the display device.

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26. 27. The computer readable medium of claim 25, wherein the display device is associated with a client on the computer network, and the code is configured to:

transmit information representative of the estimated blackpoint from the client to a server on the computer network;

modify the color image via the server based on the information; and

deliver the modified color image from the server to the client for display on the display device.

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27. 28. The computer readable medium of claim 27, wherein the code is configured to:

store the information in a web cookie;

transmit the web cookie from the client to the server; and

~~modify the color image via the server based on the contents of the web cookie.~~

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29. The computer readable medium of claim 24, wherein the code is configured to:

5 generate a color profile based on the estimated blackpoint; and
modify the color image based on the color profile.

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30. The computer readable medium of claim 29, wherein the display device is associated with a client on the computer network, and the code is configured to:
transmit the color profile from the client to a server on the computer network;
modify the color image via the server based on the color profile; and
deliver the modified color image from the server to the client for display on the display device.

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31. The computer readable medium of claim 30, wherein the code is configured to:
store the color profile in a web cookie;
transmit the web cookie from the client to the server; and
modify the color image via the server based on the contents of the web cookie.

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32. The computer readable medium of claim 24, wherein the code is configured to:
display dark elements against the black background for each of the color channels of the display device;
select one of the dark elements for each of the color channels that is visible and appears to most closely match the black background; and
estimate channel-specific blackpoints for the color channels of the display device based on the selected dark elements.

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33. The computer readable medium of claim 32, wherein the color channels are red, green, and blue color channels.

34. The computer readable medium of claim 24, wherein the ~~display~~ device is a cathode ray tube monitor or a flat panel display.

5 35. The computer readable medium of claim 24, wherein the non-rectangular shapes include a numeral or a letter.

10 36. The computer readable medium of claim 24, wherein the code is configured to:

estimate a gamma and gray balance for the display device;
generate a color profile for the display device based on the estimated blackpoints, the gamma, and the gray balance; and
modify the color image for the display device using the color profile.

15 37. The computer readable medium of claim 24, wherein the code is configured to guide the client through the process of obtaining the estimated blackpoints, gamma, and gray balance by delivering a series of instructional web pages to the client.